THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. LXIV. THURSDAY, FEBRUARY 7, 1861. No. 1.

DR. WARE'S LECTURES ON GENERAL THERAPEUTICS.

[Communicated for the Boston Medical and Surgical Journal.]

LECTURE I.—Continued from page 497, Vol. lxiii.

HAVING endeavored to explain these two distinct methods of procedure, we may next consider the manner in which we are to apply them in the treatment of disease. Although so distinct in principle from each other, and although it is so important that this distinctness should be kept in view, they are not at all, as I have already stated, incompatible, and may in fact be both relied upon in the treatment of the same case. Such, indeed, is the character of almost all medical practice, and the combination is a perfectly legitimate one, if care be only taken to distinguish the principle upon which each is resorted to. Thus, a physician may believe that pneumonia will, in a large proportion of cases, pass on through its natural course to a favorable termination, without the aid of art; but he may also believe that the establishment of the specific effect of mercury will arrest this course, will prevent a protracted disease, and perhaps save life. He may fail to establish the mercurial influence, but he may still hope that the effort of nature will, notwithstanding, be sufficient. Now this is a perfectly rational mode of procedure, and a perfectly consistent one, if mercury have this power. Whether it has or has not, is quite another question. To him who believes it has, its employment is consistent with a general reliance on the powers of nature in disease.

In accordance with the first method, which relies mainly upon the sanative powers of the system, the object is not the direct removal of disease, and consequently no formal attempt is made to do it. It assumes that the system is constantly making an effort for this purpose. Different diseases stand in a different relation to this method, and this difference requires to be considered in their treatment. In one class of cases recovery can only take place by going through with certain processes, which are

definite in character and limited in duration. In another class this definite course and limited duration are wanting, but still recovery takes place, at some indefinite period, by a natural method. In still another class of cases, though their character is such as to forbid recovery, the same sanative principle is still at work, struggling ineffectually, and yet bringing about periods of partial relief, modifying and limiting, to a certain extent, the processes of disease, and in a few exceptional cases protracting life for a long period, or even bringing about a partial recovery. Of the first class of cases, we have the most striking examples in the exanthemata, in continued fevers, and in acute inflammations. To these has been happily applied, by Dr. Jacob Bigelow, the very expressive designation of "self-limited diseases." Of the second class, are cases of neuralgia, dyspepsia, many affections of the liver and uterus, and chronic inflammations. Of the third, phthisis and cancer furnish us with examples which are only too familiar. It is not pretended that a perfectly-defined line can be drawn between these classes; and, indeed, it may be contended that, in strictness, all cases that ultimately recover by the sanative process, however protracted and irregular their course, are, in fact, "self-limited." Still, this distinction is founded on a real difference of character, for the limitation of dyspepsia is a very different thing from the limitation of typhoid fever.

The self-limited diseases are those to which the natural method is peculiarly applicable, and require least to be subjected to any interference with their course. They are certain to come to their termination, either in death or recovery, when they have passed through the several stages in which they consist. But it is not to be understood that their course is precisely identical, or that the term of their continuance is precisely the same. It is nearly so in some, as in measles and smallpox, but in typhoid fever and pneumonia there is in this respect a very considerable latitude. The limitation is only definite as to each individual case. It may be longer or shorter in different cases, and it may be varied as the consequence of influences acting upon the patient in their course. A disease of this kind is limited in much the same way as human life is limited. There is a certain period which we recognize as its average length, and thus it is self-limited. But every individual enters upon life, probably, with that in his constitution which determines to what proportion of this duration, under ordinary circumstances, he shall attain; so that one man may be born to die in infancy, another in youth or middle age, and still another to continue through his full term. But, besides this original difference, the term of life may also be varied by exposure to favorable or unfavorable circumstances during its continuance. It is just so in self-limited disease.

The tendency of opinion at the present day is to an increased, and sometimes to an exclusive, reliance upon nature in disease.

Confidence in nature has increased; confidence in measures of interference, especially in drugs, has diminished. This, which is a great change of sentiment, is partly, perhaps, a reaction from a period of excessive medication, but it is mainly the mature and deliberate result of observation and experience, founded upon an improved knowledge of the laws of disease. It may seem to you, if this be so, that the office of the physician is at an end, and that we may as well retire from the field. But this is not so. The office of the physician will continue as necessary as before. He can still render essential service to the sick. I shall even endeavor to show you hereafter that there are few cases in which direct medical measures may not be advantageously employed, though upon a principle and for a purpose different from those which have usually guided them. But whether with such measures, or without them, a case of disease may be managed well, and it may be managed ill. There is for every case good treatment and bad treatment. He only is capable of deciding with regard to this, who is acquainted with the nature, the tendencies and the laws of disease and recovery. As long as there is among mankind suffering from disease and the fear of death, there is no danger that the relation of physician and patient will become obsolete, or will cease to be regarded as one of the closest and most beneficent that one human being can sustain to another.

If, then, a reliance upon the sanative principle in the system is to lie at the foundation of medical practice, the inquiry at once suggests itself, in what way is it to be connected with and made the basis of our treatment. In order to explain this, we must first learn why it is that nature is so often defeated. If in all cases attempting to remove the evil of disease, why is she not always successful? Why does she so often prove incompetent to the task? Why does death so often take place, and why is recovery so often protracted? Now as the office of the physician, in a vast proportion of cases, is simply to assist and promote the attempt of nature to cure, in order to this it is essential for him to know what are the circumstances which impede, which prevent the success of this attempt. She may fail from inevitable causes, but she may also fail from removable causes, and if we know these causes we may prevent the failure.

We next proceed, then, to consider these causes.

Recovery is often prevented by the mere *severity or violence of the disease.* This will be best illustrated by what takes place in a case of external injury, for the natural effort follows the same laws in this as it does in disease. Thus, a very severe external injury may destroy life at once, or after a short and partial reaction, as in a gun-shot wound; or the processes for restoration may be established, go on for a time, more or less perfectly, and then the system sink under the effort; or these processes may go on to a happy termination in restoration. In various diseases, such as

scarlatina, and in many cases of poisoning, as from opium, precisely the same course of things may be observed.—A local inflammation, as in pneumonia, may be so violent as to overbear this counteracting effort of the system, and either destroy life or inflict an irreparable injury on the organ affected.

The simple *extent of a disease* which in its proper character is not severe, may be also such as to have the same effect. This we see in very extensive burns or scalds, which are quite superficial and yet prove fatal. A remarkable illustration is also found in the formidable nature of inflammations of the peritoneum, as compared with those of the pleura. A limited inflammation of either of these membranes is apparently a trifling malady that nature disposes of without difficulty. But an extensive inflammation of the peritoneum is one of the most formidable maladies we have to encounter, whilst an inflammation of the pleura, unless accompanied by tubercular or other disease, is little dreaded. This difference probably depends upon the great extent of the former membrane as compared with the latter, and not upon the nature of the disease by which they are affected.

The *character of the organ affected* may constitute another impediment. Those organs whose functions are immediately necessary to life, as the brain, heart or lungs, struggle at a disadvantage with an amount of disease which in less important ones would be successfully contended with. The system cannot well bear with the suspension or impaired condition of their function for so long a time as is required for them to go through with the necessary processes. Membranous croup affords a happy illustration of the same kind. The inflammation in which it consists is not in itself formidable, either in kind, degree or extent, for when it attacks the palate, the tonsils or the pharynx, and does not go beyond them, it is usually recovered from without difficulty. But in the larynx it interferes with the functions of the lungs, and the patient dies before there has been time for those processes to be accomplished which would result in recovery. It sometimes happens that by an opening into the trachea, when the disease does not extend into the lungs, this impediment is removed, and the disease gains time to go through with the processes which are necessary to restoration.

The *peculiarity of the structure of an organ* may stand in the way of its complete restoration. The law of restoration is a general one; it has no respect for the particular necessities of particular organs. When inflammation attacks the eye or the heart, it deals with it precisely as it would with the testicle or the skin. If the testicle is inflamed and left with adhesions of its membrane, or organized lymph in its substance, it is a matter of little moment. Its function goes on as before. On the contrary, when the same thing happens inside or outside of the heart, although the recovery from inflammation may be as complete, its function is im-

paired forever. So, too, a little scar or change of texture, left by inflammation, which might not be noticed in the skin or cellular membrane, permanently destroys the transparency of the eye.

The *state of health in which disease occurs* is a condition having effect on its progress. Where this is impaired, whether from a mere feebleness of life—from an imperfect performance of any of the functions—or from the actual presence of some chronic disease—the system undertakes the contest at a disadvantage, and this is manifested in various ways according to the nature of the impeding cause. This is so obvious that it hardly needs illustration. If the condition of an individual be such that the functions of health have been imperfectly performed, it were to be expected that the functions of disease would also be imperfectly performed. As the processes of disease are exhaustive, and require a certain amount of power for their maintenance, a want of power at the beginning may protract or defeat recovery. A very striking illustration of this kind of influence is found in the effects which the presence of chronic disease—such as cirrhosis, albuminuria, organic disease of the heart, diabetes and chronic diarrhœa—has upon the character and course of acute diseases in the same subject. The sanative effort of nature is manifestly the same as in a healthy person, but it operates with diminished power and with inferior materials. It consequently often happens that, instead of a perfect reparation of the diseased part, the work is done so imperfectly as either to leave a new disease in the organ affected, or to fail in preventing a fatal termination.

An analogous effect is produced by *reducing causes operating in the course of a case;* such as imperfect nursing, and insufficient, improper or excessive nutrition; various states of mind, either of a violent or depressing kind, especially the latter—as extreme apprehension as to the event, the occurrence of great affliction, pecuniary embarrassment. But, even more than these, it is to be feared that injudicious and excessive medication has often embarrassed the beneficent efforts of nature. Large losses of blood, violent vomiting and purging, a perseverance in disagreeable, painful and irritating remedies, have doubtless converted many mild cases into severe ones, and, though I almost hesitate to say it, some severe into fatal. The effect of all these is not manifest at first, but may even seem to be beneficial. Thus, large and repeated bleedings in pneumonia, and violent and continued vomiting in membranous croup, may undoubtedly relieve temporarily the urgent symptoms of these complaints—and I do not mean to say that, in moderation, they may not sometimes be positively beneficial—but, as they have been too often practised, they diminish the powers by means of which the patient is to be carried safely through, and interfere with those natural processes upon the successful issue of which recovery must ultimately depend.

In an analogous way the *state of the constitution* of the patient,

whether this be its original condition or an accidental one, exercises a wide influence. The difference among men in this respect is not at all to be accounted for. It is one of the unexplained mysteries of life. It is manifested, among other ways, by the different manner in which they are affected by the causes of disease——the different manner in which they undergo disease—and the different effects produced by remedies. It is not too much to say that in all these respects no two individuals are precisely alike, and no single individual precisely alike at different times. One man receives a cut upon the head; it heals up in a few days with no bad symptom, or with no symptom at all. In another, with a similar injury, the wound inflames and suppurates—the whole system is disturbed—there is loss of appetite, fever and delirium; he recovers only after a tedious and exhausting process. In a third, erysipelas seizes the scalp, the healthy processes are arrested, the disease extends, affects the brain and destroys life. So, too, a grain of opium throws one man into a quiet and delicious sleep, from which he wakes, in the morning, invigorated and refreshed; it delivers over another to the horrors of persistent watchfulness and waking visions, whilst in the morning he rises only to experience a day of nausea, faintness, vomiting and headache.

It is well known that where there is a gouty, a scrofulous, a rheumatic, or a syphilitic taint of the constitution, it not only manifests itself by attacks that are its peculiar result, but may modify also the character of ordinary diseases and interfere with their recovery. So, too, epidemic states of constitution present themselves in large bodies of people at once, not only causing the prevalence of particular diseases, but giving to them in different years a particular character—mild and tractable in one year—obstinate and fatal in another. This happens with regard to the exanthemata, continued fevers, and inflammations of the important viscera.

This subject, namely, the relation of the state of the constitution to the causes and phenomena of disease, is among the most important which can engage the attention of the practitioner in connection with treatment. It is the condition of the patient in this respect which gives rise to all those differences that we observe in different persons as to their liability to contract disease, the manner in which disease affects them, and the consequent management they require. It is to be recollected that the causes acting on the economy, to which we have reason to attribute disease, are not, in themselves alone, productive of its character. In every case of causation two factors must be always engaged. There is the cause acting, and the subject acted upon. The result will depend upon their mutual relation. If the cause remain the same, but the subject be changed, the result must be different. For example, exposure to cold in one subject produces catarrh, in others sore throat, croup, pneumonia, pleurisy or rheumatism. From the same

food one man will have an attack of dyspepsia, another of headache, another of colic, and another of diarrhœa. The subjects are different in each case. Why does typhoid fever exhibit such different symptoms in different patients? The cause is the same in all, but the state of the system is not the same in all. The peculiar character, the severity, the tractability of this and all other diseases, have little to do with the cause which produces them, but depend mainly upon the condition in which it finds the patient; so that the assemblage of the phenomena of each case expresses or indicates the state of the constitution in which they have arisen. We may not be able often to interpret properly such indications, but so far as we can, they furnish our best guides in treatment, at least so far as this is based upon the principle of natural recovery.

An occasional result of a peculiarity of constitution is a disproportion between the importance of the original affection and the disturbance created in the system by its presence. Commonly, these maintain a due relation to each other. A severe disease produces a violent irritation in the system; a mild disease a slight one. But this is not always so, and it may be even the reverse. There are patients with great susceptibility of constitution, in whom a very slight local disease may bring on a very frequent pulse, a hot skin, nausea, vomiting, delirium, loss of appetite and digestion, in fact a general disturbance of all the functions; there are those, on the other hand, where there is very little sympathy with local disease, and—even though it be considerable—the pulse are quiet, the skin cool, the tongue unchanged and the capacity for taking and digesting food continues almost as in health. In the first case, the processes of recovery are interfered with; they go on hesitatingly, irregularly, imperfectly—in the other, steadily and successfully. There are other varieties in the mode in which the system is affected, having a similar effect, but this statement is, at present, sufficient.

The *continuance of the operation of those causes which have engendered disease* also interferes with recovery—as in fevers, the exposure of the patient to filth and foul and confined air; in dyspepsia, the perseverance in erroneous and improper diet, and in insufficient exercise; in all diseases of drunkards, a continuance in their habitual indulgence. The circumstances under which the patient endures disease has also its influence—as with bad or insufficient nourishment, foul or confined air, too much heat, too little heat, and bad nursing in general.

It will sometimes happen in disease, that *a secondary or subordinate symptom* may become disproportionately violent, and assume the principal part in the case. It may, in fact, not only be a prominent symptom, but, from its severity, actually constitute the principal source of danger, perhaps the only one. Of this, we have many striking and instructive examples. Thus it is not uncommon for convulsions to supervene in the disorders of infants

and children, even where there is no connexion of the original condition with the organs from which this symptom proceeds. This is a grave complication, and may destroy life, where there would have been no danger from the primary affection.—In very moderate disorders of nervous females, secondary symptoms, hysterical in their real character, affecting the heart, lungs, or stomach, may invade the patient, and envelop in great obscurity the original character of the case, so closely do they resemble those of an absolute affection of the same organs.—No examples, however, are more striking than those which occur in persons who have been addicted to excess in spirituous liquors. In a patient of this description, laboring, for instance, under inflammation of the lungs, even of moderate severity, nausea, retching and vomiting will take place in so violent a degree, and so obstinate in their continuance, that the irritation and exhaustion they occasion prove a serious, and sometimes an insurmountable, obstacle to recovery. Of the same character is sometimes the affection known under the name of delirium tremens. This may supervene on any considerable disease in drunkards, as pneumonia, typhoid and dysentery, or after an external injury. But whatever the original malady, its symptoms are entirely merged in the new one, and its peculiar characteristics entirely lost. The patient, though exhausted by the first attack, and confined to his bed as its consequence, rises from it, becomes able to make the most violent exertions, and exhibits almost preternatural strength, and yet, on the subsidence of the delirium, tremors, and watchfulness, he is left in a state of greater weakness then before, and finishes the course of disease.

The efforts of nature, in promoting recovery, are also impeded by all *causes which exhaust the patient's strength; interfere with any important function, or inflict suffering, or even produce merely discomfort or uneasiness.* Of this description are severe and long-continued pain, protracted watchfulness, deficient nourishment, any unnatural condition of the alimentary canal, deficient secretion, or insufficient discharge, of urine. No inconsiderable part of the management of many cases consists in a careful attention to the condition of the patient in these, and many other similar particulars.

It follows, as almost a necessary consequence, that, in the same way, *medical interference* may prejudice recovery, especially where, from a want of a correct appreciation of the powers of medicine, and the limits of art, objects are aimed at which are, in their nature, not capable of being accomplished; as where the physician attempts to break up typhoid fever by continued nausea and vomiting, purging, &c.; to cure acute rheumatism by large and repeated bleedings; to put a stop to membranous croup by bleeding, nausea, vomiting and blisters; or to interfere by active treatment in the advanced stage of any disease. Injury may be done

by a false estimate of the severity of a case, and a consequent adoption of a very irritating and reducing course, when the patient would be safe without any remedies at all, or when at least gentle and unirritating ones would answer as well; as by the use of bleeding and blisters for a pain which might be subdued by a pill of opium, or a warm fomentation ; of vomiting, purging, and antimonials, in the catarrh of infants, where some soothing mixture would be all-sufficient. The peculiarity of a patient may be overlooked, which renders him intolerant of a remedy that, in ordinary cases, would be appropriate. Hence perseverance in the use of opium in those whose stomach, nerves and mind are disturbed by it; of antimonials, where they produce continued nausea, violent retching, and cramps; of cathartics in those who are pained and exhausted by their operation. We are consequently to be careful to distinguish between symptoms proper to the disease, and those which may be the result of remedies; otherwise, we may be led to continue the use of them to remove conditions that they have themselves produced; as calomel has been given to correct a greenness in the discharges of infants, which has, in fact, been occasioned by its preceding administration.

The views with regard to recovery from disease, and the principles upon which we are to treat disease, that I have endeavored to illustrate in the preceding remarks, may be briefly recapitulated in the following statements:

That there is always present in the system, during disease, the effort for its removal; or, when this is not, from its nature or its intensity, possible, for its mitigation or relief. In a large proportion of cases, this is sufficient, and will conduct patients safely to a favorable termination.

That this effort, however, is often defeated, or is rendered imperfect from a variety of causes, some of which are capable of being counteracted, and some not ; and that a very important, if not the most important part of the duty of the physician is to determine what these causes are, and to counteract them. Hence a great part of practice consists in removing the obstacles which prevent, and employing those means which will promote, the process of natural recovery.

That there are also certain remedies which have a direct power in the removal of disease, and certain others which have an indirect power, more or less efficient, in the same respect. That these may be often employed in mitigating disease and palliating symptoms, when they cannot control the malady itself; and hence may be used in aid of the sanative effort of nature.

That these two methods of procedure are not incompatible with each other, but may be advantageously used in combination; care being only taken, in order to a rational system of practice, to determine upon what principle remedies are employed, and to what means recovery, when it takes place, is to be attributed.

A CASE OF CROUP—TRACHEOTOMY—RECOVERY.

[Read before the Boston Society for Medical Improvement, Dec. 31st, 1860, and communicated for the Boston Medical and Surgical Journal.]

By James Ayer, M.D., Boston.

At 1 o'clock, A.M., November 28th, I was called to Emma J. S., aged five and a half years. The patient was previously healthy, but had suffered from a "hoarse cold" for several days. The mother had given an emetic of ipecac, with the syrups of tolu and squills combined, and used other simple remedies. I found her pulse accelerated, skin hot and dry, white coat upon the tongue, both tonsils enlarged and reddened, with a slight patch of lymph on the left only. The respiration was hurried and difficult, with a decided croup whistle. Hydrarg. subsulph. gr. iii., and the dose repeated in fifteen minutes. Free emesis followed, and a copious discharge of tough mucus was thrown off, to the great relief of the patient.

She was seen three times during the day. Syrups of squills and tolu combined was given regularly, and pulv. ipecac and hydr. subsulph., gr. v. of the former to gr. iii. of the latter, was given once or twice. Steam was employed, with powdered cinnamon bark added to the water : Pulv. Doveri, gr. iii. at night, to be repeated if necessary.

November 29th (Thursday).—Patient slept considerably. Skin partially moist ; pulse more moderate; respiration less rapid ; cough continues, with crowing inspiration; thirst moderate ; bowels free; tonsils and throat the same as yesterday. Con. med., and add. potass. chlorat. gr. vi. in solution every four hours.

30th (Friday). Slept with interruptions; had taken an emetic in the night. Pulse and respiration quickened ; skin a little moist. Three dejections through the day, the last of which was tinged with bile ; general restlessness.

December 1st (Saturday).—Was called at 4 o'clock, A.M., and found all the symptoms aggravated; pulse rapid, and respiration laborious; patient tossing about on the bed; countenance of dusky hue, and expression anxious; dilatation of alæ nasi. She had passed a sleepless night. An emetic had been given and repeated, without relief, and the Dover's powders had produced no sleep. The countenance gradually assumed a sub-livid hue, with violent heaving of the chest and abdomen, with incessant tossing. Medicine, evidently, had no power to relieve in the case, and I sent for the advice of a surgeon, at 7 o'clock, A.M., and Dr. Cabot arrived soon after. The little sufferer's pulse now beat 140 per minute, and she was rapidly failing ; the extremities becoming cold, with constant tossing, dyspnœa extreme, countenance sub-livid, and dilated nostrils. The danger was imminent, and an immediate operation was decided upon. At 7½ o'clock, the patient was placed upon the table and ætherized, and tracheotomy was performed by

Dr. Cabot. On making the incision through the skin, a large, superficial vein was found crossing the track of the wound ; this was carefully turned aside, the tissue dissected with scissors, and the trachea opened by the knife. On dilating the wound, the trachea was lined, as far as the eye could penetrate, with a dense, white membrane. The forceps were applied to it, but particles the width of the blades only could be detached ; the membrane appeared to be perfectly adherent. The child soon passed from the effects of the æther, and not the slightest accident attended the operation. The lividity of the face soon disappeared. The pulse improved, 130 per minute. Respiration easy, and less rapid. The double canula was introduced, with directions to remove the inner tube every hour for cleansing, and to drop in a few drops of water every half hour. A piece of moistened lace was placed over the orifice. Continue the steam at as high a temperature as possible; also the chlor. potass.; diet, gruel or rice-water. Dover's powder, gr. iii., if necessary, at night. Dr. Storer, Dean of the Medical Faculty, kindly furnished me with the names of students of the medical class who were willing, in turn, to take charge of the patient for several successive nights. By this arrangement, we felt better protected from any accident of floating membrane obstructing the tube.

December 2d (Sunday).—Reported a comfortable night; no Dover's powder required; slept quietly; respiration easy; one dejection ; pulse 130. A free discharge of mucus, with bits of membrane from the tube. An injection of gtt. xv. nitrat. argenti, in solution of ℈ i. to aqua f. ʒ i., was thrown into the tube. This was followed by the discharge of fragments of membrane. The patient's skin was moist, and she continued comfortable through the day. Milk punch (with brandy), and beef-tea, are taken freely.

December 3d (Monday).—The attendant reports a comfortable night, and good sleep. One dejection; no Dover's powder required. Injection of gtt. xv. sol. nitrat. arg. The pulse, in the morning, was 120; at noon, 116; and at 9½ o'clock, P.M., 140. Respiration, morning and noon, 32; at night, 40; skin drier; punch to be continued; add milk to the beef-tea, when scalding hot. There is a free discharge of mucus through the tube, and shreds of membrane.

December 4th (Tuesday).—At 8.30, A.M., pulse 128; respiration 32; slept well; free discharge from the tube, with bits of membrane; one dejection. Nourishment is taken freely. Pulse in the night reported as low as 100. In the P.M., an injection of nitr. argent. was given.

December 5th (Wednesday).—The student reports the patient to have passed a comfortable night; at 12.40, A.M., she threw off a piece of membrane, two inches in length, and half an inch broad. At 3.15, had a dejection; pulse 128; respiration 30. At 8.30,

A.M., at the morning visit, pulse 124; respiration 36. Flapping sound noticed low down; sonorous râles over both chests. She passed a comfortable day. In the afternoon, one dejection, and small bits of membrane were thrown off during the day. At 9.30, P.M., pulse 117; respiration 29; no râles.

December 6th (Thursday),—Night passed comfortably; one fæcal discharge; bloody mucus thrown off freely through the tube. The inner tube was removed every hour, and cleaned. At 12.10, A.M., pulse 116; resp. 28; patient quiet and easy; brandy punch taken freely. At 8.30, morning visit, pulse 114; respiration 32; sonorous râles over left chest; no voice on closing the tube; expresses her wants by signs. 11 o'clock, P.M., pulse 112; respiration 30; no râles; tongue clean at the tip. 6, P.M., slight, sonorous râles over right chest; comfortable. 9.30, P.M., pulse 114; respiration 30; one dejection, liquid and dark; seven pieces of membrane collected since last visit.

December 7th (Friday).—Passed a comfortable night; at 12 o'clock, coughed up three pieces of bloody membrane through the outer tube, the largest of which was one inch long, and one fourth of an inch broad; pulse 102; resp. 30; slight mucous râles over the chest. Chlorat. pot., gr. iii. in solution every 4 hours; sleeps quietly; iced milk-punch taken at intervals. 9, A.M., morning visit, pulse 118; resp. 28; sonorous râles over right chest; patient had been crying, and was excited; no cough; breathing free. At 1 o'clock, P.M., pulse 112; resp. 24; mucus bloody. The cork applied to the tube produced cough; no râles. At 9.40, P.M., pulse 108; resp. 24; râles absent; sleeps well; urine free; discharge of bloody mucus mixed with pus from the tube, and bits of membrane.

December 8th (Saturday).—Student reports, at 1.45, a loose dejection, and a copious discharge of bloody mucus from the tube. Morning visit omitted, from other engagements. At 12.12, P.M., pulse 112; resp. 32; slight mucous râles over left chest; free discharge of bloody mucus. She desires food. At 9.20, P.M., pulse 116; resp. 32; no râles; free discharge of mucus, and small bits of membrane; appetite improving; two slight dejections. The cork was applied to outer tube for two minutes, producing cough; voice feeble, and heard for the first time since the operation.

December 9th (Sunday).—Student reports a quiet night, and good sleep; at 12.30, A.M., pulse 120; resp. 28; discharge of bloody mucus, and bits of membrane. At 9.30, A.M., pulse 112; resp. 32 after crying; very comfortable; countenance more natural; cork applied for four minutes; breathing freely through the larynx; no lividity; a free discharge of mucus followed the removal of the cork. Beef-steak and bakers' bread allowed for breakfast. At 9, P.M., pulse 108; resp. 29. The steak gave no trouble; two slight dejections. No membrane was discharged through the day, the first exception since the operation; bread and milk taken for

supper; cork applied for 4½ minutes, without inconvenience. Both tubes were then removed; respiration unchanged.

December 10th.—Patient reported to have slept quietly, discharging occasionally mucus, with small bits of membrane. At 1 o'clock, A.M., pulse 112; resp. 32. At morning visit, breathes easily when the orifice is closed; direct its closure occasionally; lime-water to be given in her food; discontinue chlor. potass.; give beaf-steak, bakers' bread, and milk; no membrane through the day; orifice closing.

December 11th.—Pulse 104; resp. 24, after brushing her hair; passed a comfortable night; slight discharge of light-colored mucus from the orifice, but no membrane; articulation feeble when the wound is closed; continued comfortable through the day.

December 12th.—Had a quiet night; pulse 100; resp. 24; one dejection in the night; took medicine twice through the day; slight mucous discharge; coughs when she drinks.

December 13th.—Slept well; took mutton broth for breakfast; orifice nearly closed; air passes through it slightly; pulse 100; resp. 24.

December 14th.—Pulse 100; resp. 26; passed a quiet night; the wound perfectly closed. She has a cough. Chlor. potass., gr. vi. in solution, to be given every four hours, and syrups tolu and squills mixed occasionally. No dejection for three days.

December 15th.—Pulse 100; resp. 26; slept well; very comfortable; no dejection; steam to be omitted by day.

December 19th (Sunday).—Pulse 96; resp. 24; one dejection; slept quietly; wound cicatrized; up and dressed.

All the symptoms continued improving till Saturday, December 22d, when she was dismissed. The voice continued to improve, but, at that time, was not above a loud, hoarse whisper; no soreness about the wound or throat.

Several points in this case deserve attention:

First, the age, 5½ years, the general good health, and remarkable docility of the child were highly favorable to recovery.

The character of the membrane extensively and perfectly adherent, and slowly detached, surely foreboded no good.

The imminent peril of the sufferer before the operation, and the instantaneous relief after. The good effects of the injection of nit. argent., in dislodging the membrane, and allaying inflammatory action. The apparent benefit of the continued use of chlorat. potass., given, with slight interruptions, through the course of treatment. Only one Dover's powder was given after the operation, so uniformly comfortable was the patient. Before the operation, they were given repeatedly to allay irritation, or produce sleep. Steam was kept up constantly till the wound was closed, at a temperature of 70°, and above. Our arrangements to accomplish this were more perfect after the operation than before.

The patient was unwilling to take beef-tea, but milk was added

to it, when scalding hot, according to the practice of the late Dr. Buck. She then became very fond of it, and called it "oysters." This little circumstance is important, when we consider how difficult it is to find a new article of diet for a child.

The small patch of lymph on the left tonsil, observed at the first visit, was the only one noticed throughout the disease. The throat and larynx were remarkably free after the operation—possibly due, in part, to the continued use of chlor. potass.

The successful result of the operation, however, was largely due to the persevering attentions of the family, and especially of the father, and the watchful care of the young medical gentleman who so kindly relieved my anxiety for her by night. Fortunately, no obstruction occurred, requiring the removal of the outer tube, till it was dispensed with.

Dr. Cabot made the morning visit with me, and usually the evening, till the canula was removed. The operation was performed December 1st, and the tubes removed on the 8th, just one week.

SUCCESSFUL CASE OF TRACHEOTOMY IN CROUP.

[Read before the Boston Society for Medical Improvement, Jan. 28th, and communicated for the Boston Medical and Surgical Journal.]

By Samuel Cabot, Jr., M.D.

W. F. D., aged two years and seven months, son of healthy American parents, was born with what I presume to have been atelectasis of a portion of one lung; and, for the first twelve months after birth, was rather a feeble child, suffering almost constantly with bronchitis, and finally with diarrhœa also. Medicine seemed to do little or no good; and I put him on the use of scraped raw beef, which he took a great liking for, and under the use of which he rapidly gained health and strength, his diarrhœa leaving him very soon, and, after a summer in the country, he returned in robust health, without cough or other ailment, until about fourteen days before I saw him, when he had a breaking out upon the face, which, from the account given by the parents, I suppose impetiginous. On the evening of January 2d, I was sent for to see him. I found that he had been observed to be somewhat hoarse the day before, but had seemed well in other respects, though still having the remains of the eruption about the nose and mouth. When I saw him, he was breathing rapidly, and with some difficulty, his respiration noisy, and having some hoarse cough; his tongue was coated with a white coat, but no membrane was seen on the tonsils. He had eaten largely of corned beef, cranberry sauce, &c. Attributing his symptoms to spasmodic affection of the larynx consequent upon indigestion, I gave him an emetic, which brought away a considerable quantity of undigested food, with some relief to the symptoms.

January 3d.—Breathing quite hoarsely, with same hoarse cough; no membrane visible in throat; p. 140. Gave another emetic, which brought away only some mucus, and a bit of false membrane about one third of an inch square; put him in a room filled with steam, and gave chlorate of potass.; had his bowels emptied by an injection. He seemed rather better during the day; his pulse fell in frequency, and his breathing was easier.

January 4th.—At morning visit much as yesterday; became worse towards night; p. 150; resp. labored; alæ nasi moving strongly.

January 5th.—Had an early visit from the father, who said that the little fellow had seemed on the verge of suffocation during the night for a considerable time; had then become easier, and remained so until shortly before he came for me, when the same symptoms of suffocation had recurred with increased severity. When I arrived, I found him struggling for breath, with a sub-livid face; pulse 170, and intermittent. Feeling that the only hope was in the performance of tracheotomy, I sent for Dr. Buckingham, who fortunately lived near at hand, to meet me. He concurring in the propriety of tracheotomy, I immediately proceeded to the performance of that operation. We found that false membrane covered the trachea at the point opened, and extended below the part visible. We made some unsuccessful attempts to peel off some of the false membrane; but, on introducing the tube, and finding that air did not pass through it, I withdrew it, and immediately a bit of false membrane was thrown out, which had probably been pushed before the tubes, and plugged them, preventing the passage of the air; on re-introducing the tube, the respiration soon became satisfactorily established, the complexion improved, as also the pulse, which fell to about 130.

I was so fortunate as to secure the attendance of some of the members of the Medical Class, who continued to watch the case with unremitting care, until danger had passed, and to whose intelligent watchfulness and care the successful issue of the case may be largely attributed. Two hours after the operation, the pulse had fallen to 120; res. 56. During the day, a number of pieces of false membrane were thrown off, among which was one about half an inch square. The child took some beef-tea, and argent. nit. ℈i. to the f. ʒ of water was injected once or twice in the course of the day; the chlorate of potash was continued, and the steam kept up in the most thorough manner. The child slept a good deal, without opiates. The chlorate of potass. had to be discontinued several times during treatment, on account of diarrhœa. Took milk-punch and beef-tea freely; and, during the nights of January 5th and 6th, some Dover's powder, which was the only time he took it.

January 7th.—Pulse 130, 140; respiration 68, 70; got scraped raw beef; relished it very much; took also beef-tea.

January 8th.—Much as yesterday; little or no membrane; some loose dejections.

January 9th.—Pulse 128, 130; respiration 48, 60; sitting up and amusing himself; eats his beef with a good relish. After removing inner tube, had cork inserted in outer one; could breathe a little through larynx.

January 10th.—Has taken beef and pap with good relish; plays with toys; pulse and respiration much as yesterday; can breathe a little through larynx.

January 11th.—Pulse 136; respiration 40. Can breathe more through larynx.

January 12th.—Pulse 120; respiration 50; both tubes taken out; appetite good; strength improving.

January 17th.—Since last record, pulse has kept along at about 125; respiration 49; appetite has continued good; strength and spirits improving; cough has diminished; orifice has been slowly closing, and to-day no air passes through it. Voice more and more audible every day; can be easily understood across the room to-day; pulse 120; respiration 34.

January 23d.—Up and dressed; playing about the room.

January 25th.—Voice almost natural.

Bibliographical Notices.

On Obscure Diseases of the Brain and Disorders of the Mind; their incipient Symptoms, Pathology, Diagnosis, Treatment, and Prophylaxis. By Forbes Winslow, M.D., D.C.L., &c. Philadelphia: Blanchard & Lea. 8vo. 1860.

This is an interesting but singular book. It contains an immense amount of facts, pertinently illustrative of every form and phase and shade of mental and moral disease. These are given in an easy, gossiping manner, spiced with emphatic and abundant adjectives, and fascinating the reader like a story book. The work is divided into chapters, and each chapter has its title, which, however, is not always an indication of what you are to find in its perusal. As you go on with the book, you are impressed with the belief that after a number of cases somewhat akin had been observed by the author, they had been grouped, and commented and theorized upon, and "pigeon holed" for future use; and when this process had been repeated a number of times, at odd intervals, and without any definite or connected intention, the materials were some day brought out and linked together, and each package made a chapter of this book. Indeed, the writer avers that his intention, in commencing, was to write a *prefatory* chapter to a work which he has prepared upon "Organic Diseases of the Brain," and that its unexpected length had induced him to publish it as an introductory *book* to others which will follow. This prefatory feature runs through the work; subjects are broached and briefly theorized upon, and their further examination deferred until another time. In spite of

all the peculiarities of its arrangement, which we really have not much right to call faults, the book is a valuable collection of facts in the history of insanity, and of short essays upon subjects connected with this disease, of great importance to the community and great interest to the general reader. In several of the first chapters, the incipient symptoms of this disease are given with remarkable truthfulness, and the importance of its *early* recognition and treatment very forcibly stated. They are worth the study of every physician, and if acted upon would prevent a vast amount of incurable cerebral disease. Two chapters are occupied by a detailed account of the state of mind during the continuance of insanity, and while one is emerging from the disease, when delusions are disappearing one by one, and the person is gradually finding out his true position and relations to others. These are derived from observation and from statements made by patients after recovery. Some of these descriptions are extremely graphic and thrilling, and convince one of the *intense* life of the insane. Another chapter, upon "Anomalous and Marked Affections of the Mind," treats of a great variety of mental and emotional disturbances which are not commonly called derangement, and examines the thousand and one freaks and extravagancies of persons who are not called deranged, and clearly exhibits their morbid element; and the much abused but most serious subject of moral insanity is treated briefly, but in a very able and convincing manner. The most interesting, if not the most instructive, portions of the work are those upon the memory and its disorders. These are quite lengthy, occupying nearly a sixth of the volume. They are made up of a rare collection of anecdotes and a detail of cases, given in a pleasant style, and are as entertaining as a romance.

The author, through the whole book, contends that insanity never can exist without physical disorder—that the mind itself is incapable of disease, and only exhibits morbid features, through the disease of its organ, the brain; and that, therefore, this, like other physical diseases, is amenable to medical treatment.

This book is a valuable one for reference—is a sort of encyclopædia of all minor matters connected with insanity, and the forthcoming volumes, which this introduces, will be looked for with interest, and will undoubtedly be written with the same care and in the same style which has marked the author's previous productions. T.

Report of Professor Valentine Mott's Surgical Cliniques in the University of New York, Session 1859–60. By SAMUEL W. FRANCIS, Member of Dr. Mott's Surgical Staff. *Sic est Vita.* New York: S. S. & W. Wood, 389 Broadway. 12mo. Pp. 209. 1860.

This modest little volume contains an account of ninety-one cases treated by Professor Mott, in his surgical cliniques during the winter course of lectures, given at the University Medical College, Fourteenth Street, New York. The cases are very interesting, and many of them highly instructive. The history, treatment, diagnosis and prognosis of each case is clearly stated, and set forth in terse and appropriate language. Written in a pleasant style, the book will be of value to the student and young practitioner, as embodying the results of the experience of one of our most distinguished surgeons. It is well printed and bound, and provided with a table of contents. It

contains a correct portrait of the venerable Dr. Mott, engraved by Mr. W. G. Jackman, one of the most skilful artists of New York. The volume comprises, also, the report of Mr. Francis, for which he received the bronze Mott Medal, an annual prize awarded for the best clinical report. Dr. Samuel Ward Francis is the youngest son of the well-known Dr. John W. Francis, of New York. He is a graduate of Columbia College, of the class of 1857, from which institution he graduated with high honor. On the 7th of March, 1860, he received his diploma, creating him Doctor of Medicine, from the faculty of the University Medical College of New York, and in July of the present year Columbia College conferred on him the degree of A.M. In concluding this brief notice, we can only express the hope that his future may be as bright as his career thus far leads us to predict.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, FEBRUARY 7, 1861.

With the present number, commences a new volume of the Journal, and it will be noticed that a change has been made in the editorial department. The retirement of Dr. Ellis will be much regretted by our readers, as well as by all with whom he has been officially connected or associated. If, however, we are to lose the benefit of his aid and counsel, he cannot deprive us of the example of diligence and fidelity he has left behind him, and by which we shall not fail to profit. We further console ourselves with the reflection that although his efforts will be hereafter more exclusively confined to other departments of labor, medical science will still reap the fruit of his talents and untiring industry.

It only remains for the present editors to add that it will be their first endeavor to discharge the responsible duties they have assumed faithfully and impartially, and to render the Journal, so far as lies in their power, worthy the profession it represents. How far they may succeed in their efforts, will depend in a measure upon the countenance and support of those to whom the Journal is already indebted, and with which there can be little room for distrust or doubt.

Election of City Physician.—At the meeting of the Common Council, held on Thursday, Dr. J. S. Jones was elected City Physician, in place of Dr. Henry G. Clark, who declined a re-election. The office has been greatly honored by the late incumbent, and his valuable contributions to sanitary science have inspired the respect of the whole profession. We can greet Dr. Jones, on his accession to office, with no better wish than that he may sustain the reputation which his predecessor has given to it. In a future number we propose to notice the volume of medical writings recently presented by the latter to the City Government.

We publish the following report of the Special Committee appointed to visit the Medical School of Harvard University. It will be seen

that the facilities for instruction in several of the departments have been materially increased during the past year, and that the institution was never in a more flourishing condition than at the present time:—

To the President and Overseers of Harvard College:—

The Committee appointed for that purpose, made the annual visit for the examination of the Medical School, on Wednesday, January 2d, 1861. Present of the Committee, the Chairman, and Drs. J. Mason Warren, Thomas R. Boutelle, Gilman Kimball, Jonas A. Marshall and William J. Dale. Seven of the eight professors were present, and gave personal information to the Committee, and accompanied them to the lecture rooms and different apartments of the building. Each of the professors also gave a written report from his own special department.

In the department of Obstetrics and Medical Jurisprudence, no verbal explanation was made, and the written report, while possessing the merit of brevity and terseness, entirely failed to impart to the Committee the information which the rules of the Overseers make it their duty to obtain.

The Professor of Morbid Anatomy made a detailed report concerning his department; and the Committee were highly gratified by an inspection, under his personal guidance, of the excellent and increasing facilities for instruction afforded by the collection of morbid specimens in the Warren Museum. Within the past year 124 new specimens have been added to this collection, making, at the present time, a total of 2244 specimens.

During the past year, the whole of this valuable collection has been re-arranged and classified under the personal direction of the professor; and their present order, security, neatness, and convenience for study, we are confident will not suffer by comparison with any other collection in the world.

Once a week the students have a demonstrative lecture on the specimens, in addition to the usual systematic course in this department.

The importance of this branch of medical science, and its due prominence in the student's course of study, cannot be too strongly insisted upon. Your Committee bear willing testimony to the inestimable value of the means of illustration in this department, as also to the accuracy, enthusiasm and fidelity of the Professor.

In the departments of Theory and Practice and Clinical Medicine, the Committee find an excellent method of instruction is pursued; science is here literally and thoroughly made practical in the study and treatment of disease. We experienced unmingled satisfaction in hearing their explanations and reading the lucid and detailed reports of the mode of teaching pursued by the learned Professors in these departments.

The Parkman Professor of Anatomy and Physiology furnished a very gratifying account of his department.

The increased facilities for practical anatomy, the use of the microscope, the multiplication of anatomical preparations, the abundance of drawings and other illustrations, are all made more intensely valuable to the student by the genius and eloquence of the Professor, and leave nothing more to be desired in this department of instruction.

The Professor of Materia Medica gives a very gratifying account of the attendance upon his lectures.

Your Committee regret to observe a great deficiency in the Cabinet of Materia Medica. We believe that drugs cannot, with best results, be wholly dispensed with in treating disease, and that the present and succeeding generations of physicians will continue, practically, to find a necessity for using opium in terribly painful diseases, cinchona in ague, citric acid in scurvy, and iron in anæmia, besides some other medicines of great practical value, though of less comparative certainty.

While this prosaic necessity for the use of medicines exists, and the good time is delayed, dreamed of by the poet, of mercy to men and cruelty to fishes, when all drugs are cast into the sea, an imperative necessity will also exist that medical students should be thoroughly and practically taught in the natural history, quality and purity of drugs. To obtain this knowledge, specimens must be examined, their natural and therapeutic character studied, and the tests for purity applied. We respectfully call your attention to this subject, suggesting the propriety of adopting some means to remedy this deficiency.

In the department of Surgery, the mode of instruction is highly satisfactory. The means of illustration by diagrams, drawings, plates and models, are well chosen and abundant. In addition to oral teaching, the students have the opportunity of witnessing numerous and often important surgical operations at the Massachusetts General Hospital.

The Professor of Chemistry gave the Committee every facility for inspecting his department, and also furnished a very gratifying report. The system pursued is eminently thorough and practical. The neatness, order and system that prevail in this department are worthy of all praise. None but a true devotee in the science of chemistry can develope and maintain such perfect order in the cabinet and laboratory.

The present winter term of lectures has attracted a larger class of students than has ever before attended in a single session. Over 200 students are now members of the Medical School. This fact, which must be very gratifying to the Professors, we think may safely be accepted as the seal of public approval of their mode and quality of instruction.

In a word, we regard the School as in a healthful and vigorous condition, and most cordially and unanimously commend it to this Honorable Board, and bespeak for it a continuation of the well-earned confidence of the medical profession.

Respectfully submitted, for the Committee,

January 31, 1861. ALFRED HITCHCOCK, *Chairman.*

MEETING OF THE SANITARY ASSOCIATION.—A meeting of this Association was holden in the Representatives' Hall, on Thursday evening last. The President, Dr. John Ware, presided. The following abstract of the proceedings is taken from a printed report, corrected and officially endorsed :—

The first paper was read by Dr. Robert Ware. He said that for nearly twelve centuries smallpox has been recognized as one of the most fearful diseases to which the human race is liable. Of its horrors when prevailing as an epidemic, we can at the present day form no conception. In the 18th century it was estimated that seven per cent. of the human race—that is, one out of every fourteen persons

born into the world—died of it. Upwards of 2000 persons died of it every year in London, and nearly 40,000 in the kingdom of Great Britain; while its victims throughout the whole of Europe were estimated at 500,000 annually. Extensive and fatal epidemics were not unfrequent in the early history of Boston. In 1702, 313—about 4.4 per cent., and nearly one twentieth of the population—died of this disease. In 1721 more than one half of the population had it, and 844 died. In 1752 the disease was again epidemical, and very fatal. The town then contained 15,684 inhabitants; of these, 5998 were supposed to have previously had the disease, and were consequently protected; 1843 moved out of town; all the rest, except 174—being 7669 persons, and almost one half the population—had the disease either by inoculation or in the natural way, and the whole mortality was 569. From the fact that 467 of these deaths took place in the two months of May and June, it would appear that almost one half of the population lay prostrate with the disease at once.

Nothing is known with certainty with regard to the origin of the method called inoculation, devised to check the ravages of this frightful disease. It was introduced into Boston in 1721, during a very extensive and fatal epidemic of the smallpox, and was at first very little practised. Even so late as 1752 inoculation was so incompletely practised, that upwards of 5500 persons were capable of taking the smallpox in the natural way. Later in the century the benefits were more fully recognized, and in 1792 of 8346 cases, all but 232 were of the inoculated form, and of these nearly two per cent. died. Inoculation performed among the poor in their own houses, and without any particular precaution; and among the rich, chiefly at special hospitals established in the country, was the only means of providing from the ravages of the disease known up to the beginning of the present century.

There was no epidemic of smallpox in Boston from 1800, the time of the introduction of vaccination, until 1839. In that year 60 deaths, and, in 1840, 115 deaths were caused by it. The city has not been wholly free for the space of a year since that time, except in 1844. In that year there were no deaths. From 1811 to 1839, a period of twenty-eight years, the number of deaths from smallpox was only 52, while in the twenty-two years from 1839 to 1861, 1491 deaths occurred from it. The population during the former period increased from 34,000 to 80,000, and during the latter period from 80,000 to 180,000. The increase of mortality from smallpox is wholly out of proportion, and must be attributed to some other cause. This increase does not appear till 1839; in 1838, the law providing that persons attacked by the disease should be at once removed by the authorities to the hospital at Rainsford Island was repealed, since which time no attempt has been made to protect the community by isolating the infected, so that the increase of mortality becomes coincident, in time, with the removal of the precaution adopted against the spread of the disease.

To recognize the inestimable blessing of vaccination, we have only to consider what would have been the condition of this city during the months of the recent epidemic, had it been unprotected as in 1721, or had a large majority of the population undergone inoculation at once, as was the case in 1792; on the first occasion one half of the population lay sick with the disease at once, and one twenty-seventh part died of it. A similar proportion of cases and deaths would

have now laid ninety thousand persons upon sick beds, and would have caused about seven thousand deaths in a population as large as ours. In 1792, 46 per cent. of the whole population had the disease, mostly in the inoculated form, and 1 per cent. died; a like proportion would give, in our population of 180,000, 82,800 cases of disease, and 1800 deaths. Such an amount of sickness and death would have sensibly affected the business interests of the city; but as it was, the presence of an epidemic was hardly to be recognized, except from the talk which vaccination excited, and many physicians did not see a case of the disease during the entire twenty months of its presence. We have seen that the city was almost entirely free from the smallpox from the beginning of the century till the year 1839. The tables of mortality from 1811 to 1839, a period of twenty-eight years, show that only 52 deaths from this disease occurred. During this period the law requiring the removal and isolation of those infected, was in force. Vaccination was introduced very soon after this law of 1797 went into operation. This immunity, which was due to the combined effect of these two causes, was ascribed to one, and the law was repealed in 1838.

In the next two years 175 persons died of smallpox. The city has been visited epidemically at least four times since, and in the twenty-two years from 1839 to 1861, 1491 deaths have occurred. Probably other causes than the repeal of the law contributed to this result, and the large foreign immigration which took place at this time was not without its influence. The population has largely increased, and especially that class whose houses and habits furnish a prolific bed for the disease. The fact remains that, while this law was in force, smallpox was never epidemic, and death from it was very rare; but that since its repeal the prevalence of the disease and its mortality have largely increased. From an examination, such as has been attempted, of the history of the disease of smallpox in this city, of the legislation in regard to it, and of the recent epidemic, two practical points present themselves for the consideration of the Association:

First—Whether a return, either wholly or in part, to the system of removing those affected with variolous disease, and this includes the so-called variola, to a special hospital, be desirable. The law might be made quite effective, and yet less harsh than if the removal were imperative, by providing that only those cases of the disease occurring in houses occupied by more than one family be of necessity removed, while those occurring in families occupying an entire house might be secluded by the police at the expense of such families.

Second—Whether some more efficient regulations than those existing for the enforcement of vaccination should not be adopted. So far as relates to the fines for non-compliance with the law, they are of no avail whatever; the only practical method by which vaccination is enforced is by the regulation relating to the public schools. This is not sufficient, and does not reach, as the recent evidence shows, two considerable and exposed classes of the community.

Vaccination is performed gratuitously by the City Physician, but we cannot rely upon the willingness of all classes to submit themselves and their children to the operation. If some plan were devised by which the city should be divided into districts, to each of which a competent officer should be appointed, whose duty it should be to see that every individual in his district was properly protected by vacci-

nation and re-vaccination, and to vaccinate him if necessary, there can be no doubt that smallpox would be less prevalent and less fatal.

This plan is open to the objection of compulsion; but, in such cases, society has a right to compel. Any person who is not protected by vaccination, so far as his system is capable of protection, may be regarded as a nuisance, and, as such, should be abated.

Dr. John Homans rose, when the reading of the paper was brought to a close, to express the pleasure he had derived therefrom, and made some remarks on the opinion which has got abroad, that the vaccinating virus is not so effective now as in the earlier days of its discovery. From '97—8, and for eighteen years after, it seemed to retain its strength perfectly; but, after that period, it was thought not to be so reliable in its protective qualities as before.

The President announcing that the contents of the next paper would cover the particular point in question, further discussion was postponed; and Dr. J. C. White read a very able and interesting article on "The Introduction of Vaccination, and its Influence upon the Mortality from Smallpox." The following are the conclusions arrived at as the result of the investigation of the committee which he represents:

First—That the introduction of vaccination acted as an immediate check to the frightful ravages of smallpox in all parts of the world. That it destroyed the susceptibility to the disease in the individual as completely as inoculation, or a previous attack of smallpox, without the danger or inconvenience which accompany the latter. That, through its action, epidemics of smallpox have become far less frequent than formerly, and their mortality has been reduced to a great extent. That its success has been greatest in those countries where its universal employment has been made compulsory.

Second—That the protective power of vaccination is absolutely the same to-day as it was in the time of Jenner.

Third—That the immunity conferred by vaccination is not alike, either in amount or duration, in all persons. That the history of epidemics teaches that smallpox will attack a definite proportion of the vaccinated if exposed to its influence. That post vaccine smallpox is very rare before the tenth year in children, and that it increases in frequency from the age of twelve to that of twenty-five. That, after the age of thirty-five, the inherent predisposition to take smallpox seems to die out to a great extent, both in the protected and unprotected.

Fourth—That we possess, in re-vaccination, our only means of ascertaining the condition of individual security at any time, and of affording it when found wanting. That the large proportion of cases in which re-vaccination is found to be successful, its influence in preventing the rise and spread of epidemic smallpox, the renewed safety it affords persons of all ages, and the unanimity of European governments in making its performance compulsory, so far as possible, are sufficient grounds for any action the Association may deem proper to take to render its employment among us more general.

Fifth—That there is no sufficient evidence to show that the vaccine virus now in use has degenerated in any way since the days of Jenner, or that there is any necessity to resort to the cow for a fresh supply.

Sixth—That the operation of vaccination and re-vaccination is perfectly safe in itself; and that the popular opinion, that diseases may

be introduced into the system by vaccination, is entirely erroneous, and should be eradicated from the public mind.

Seventh—That the recent epidemic conclusively shows, that a great neglect of the proper precautionary and preservative measures prevails in the community, and that some more effective means than those now employed should be adopted to prevent its recurrence in the future.

On motion of Alderman Clapp, the two gentlemen who presented the reports, and the President of the meeting, were appointed a committee to memorialize the Legislature for action in regard to this subject. The President announced that the next meeting would be held two weeks hence, when Dr. Jarvis of Dorchester will speak on "The Interest and Responsibility of the State and General Government in the Health of the people."

Hon. Thomas H. Russell then moved a vote of thanks to Drs. Ware and White for their instructive reports, which was carried unanimously, and the meeting adjourned.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, FEBRUARY 2d, 1861.

DEATHS.

	Males.	*Females*	*Total.*
Deaths during the week,	27	39	66
Average Mortality of the corresponding weeks of the ten years, 1850–1860,	38.6	35.0	73.6
Average corrected to increased population,	..	..	82.14
Deaths of persons above 90,	..	..	..

Mortality from Prevailing Diseases.

Phthisis.	Croup.	Scar. Fev.	Pneumonia.	Measles.	Smallpox.	Dysentery.	Typhoid Fever.
13	1	2	3	0	1	0	1

METEOROLOGY.

From Observations taken at the Observatory of Harvard College.

Mean height of Barometer,	29.928	Highest point of Thermometer,	35°
Highest point of Barometer,	30.238	Lowest point of Thermometer,	5°
Lowest point of Barometer,	29.600	General direction of Wind,	N.W.
Mean Temperature,	25°.35	Am't of Rain (in inches)	0.325

From Observations taken by Dr. Ignatius Langer, at Davenport, Scott Co., Iowa. Latitude, 41.31 *North. Longitude,* 13.41 *West. Height above the Sea,* 585.

		Barometer.					Thermometer.				Snow.		Mean Amount of Cloud. 0 to 10.
		7 A.M.	2 P.M.	9 P.M.	Mean Height,	Highest Point,	7 AM	2 PM	9 PM	Mean Height,	Time	Measure.	
Monday,	Jan. 21,	29.75	29.78	29.83			3	14	5				
Tuesday,	" 22,	29.61	29.75	29.65			5	29	21				
Wednesday,	" 23,	29.56	29.36	29.32			28	36	34				
Thursday,	" 24,	29.30	29.30	29.42	29.50	29.83.	21	7	6	14.57	0 hours, 00 m.	0.00.	5.40
Friday,	" 25,	29.50	29.46	29.48			3	15	12				
Saturday,	" 26,	29.40	29.40	29.38			17	30	28				
Sunday,	" 27,	29.42	29.49	29.50			2	9	4				

MARRIED,—In this city, January 29th, Freeman J. Bumstead, M.D., of New York, to Mary Josephine, daughter of the late Ferdinand E. White, of Boston.

DIED,—At Randolph, Thomas B. Wales, M.D., son of Dr. Ephraim Wales, 38.

DEATHS IN BOSTON for the weeking Saturday noon, February 2d, 66. Males, 27—Females, 39.—Abscess (of the throat), 1—accident, 1—anæmia, 1—apoplexy, 1—inflammation of the brain, 1—bronchitis, 3—cancer, 2—cholera infantum, 1—consumption, 13—convulsions, 1—croup, 1—cyanosis, 1—debility, 1—infantile disease, 2—puerperal disease, 1—dropsy, 1—dropsy of the brain, 3—erysipelas, 1—scarlet fever, 2—typhoid fever, 1—disease of the heart, 2—disease of the kidneys, 2—disease of the liver, 2—congestion of the lungs, 1—inflammation of the lungs, 3—marasmus, 2—meningitis, 1—old age, 1—paralysis, 2—premature birth, 2—scirrhus, 1—teething, 2—thrush, 1—tuberculosis, 1—unknown, 5.

Under 5 years of age, 31—between 5 and 20 years, 4—between 20 and 40 years, 17—between 40 and 60 years, 7—above 60 years, 7. Born in the United States, 50—Ireland, 12—other places, 4.